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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,717	07/11/2007	Peter Key	025736-00013	2141
4372	7590	05/13/2009		
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			EXAMINER ADAMOS, THEODORE V	
			ART UNIT 4134	PAPER NUMBER
			NOTIFICATION DATE 05/13/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
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Office Action Summary

Application No.

10/594,717

Applicant(s)

KEY, PETER

Examiner

THEODORE ADAMOS

Art Unit

4134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/29/2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-29 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date IDS 09/29/2006
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed September 29th, 2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it contains self-evident clauses in line 1 where it states "The present invention relates." Correction is required.

See MPEP § 608.01(b).

4. The abstract of the disclosure is objected to because "the" in line 10 of the abstract is not capitalized even though it begins a new sentence. Correction is required.

See MPEP § 608.01(b).

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: roof sheeting #14, packer element #29, ballistics board #38, door opening #44 and bolted lintel #46. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the upper tendon of

claim 2 and the pair of diagonal web members of claim 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "28" has been used to designate both internal void and lower tendon. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each

drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 9-19, and 23-29 rejected under 35 U.S.C. 102(b) as being anticipated by Conn (U.S. Patent 4,894,962).

10. In regards to claim 1, Conn discloses the invention including

- a plurality of constructional modules being of predetermined configuration (a plurality of components of which component #11 is typical, figure 1, col. 4 lines 10-12)
- one or more conditioning elements being arranged to cooperate with constructional modules wherein adjacent of said modules engage one another to form the structure (cable #30, figure 2, col. 4 line 39)

- one or more packer elements being adapted to locate between adjacent of the constructional modules to effect reconfiguration of the structure (insert #55, figure 7, col. 5 lines 12-17).
11. In regards to claim 9, Conn discloses the invention including
- a structure as defined in claim 1 wherein the constructional module includes interlocking means being arranged to provide interlocking of the adjacent modules (pin #27 inserted through pinhole #25 in the fixture and through the pinhole #26 in the flange to pivotally connect the fixtures, figure 2, col. 4 lines 34-39).
12. In regards to claim 10, Conn discloses the invention including
- a structure as defined in claim 9 wherein the interlocking means includes an integral spigot (flange, figure 2 #23) being adapted to engage a hole (slot, figure 2 #24) of an adjacent module, or vice versa, and designed to permit pivotal movement between adjacent of said modules (pin #27 inserted through pinhole #25 in the fixture and through the pinhole #26 in the flange to pivotally connect the fixtures, figure 2, col. 4 lines 34-39).
13. In regards to claim 11, Conn discloses the invention including
- a structure as defined in claim 10 wherein the spigot or hole allows a hinged action between said adjacent modules (pin #27 inserted through pinhole #25 in the fixture and through the pinhole #26 in the flange to pivotally connect the fixtures, figure 2, col. 4 lines 34-39).
14. In regards to claim 12, Conn discloses the invention including

- a constructional module or a structure as defined in either of claims 10 or 11 wherein the spigot and/or hole together with the surrounding portion of the constructional module is reinforced (beams #28 and #29 are used to reinforce the hinged position and hold the pins #27 into place, figure 2, col. 4 lines 34-39).
15. In regards to claim 13, Conn discloses the invention including
- a structure as defined in claim 1 wherein the constructional modules are of a composite construction (the components of the arches may be made using any of various materials and techniques known in the art, materials including concrete, metal, plastic, fiber reinforced plastic, wood or combinations, col. 3 lines 40-44).
16. In regards to claim 14, Conn discloses the invention including
- a structure as defined in claim 13 wherein the composite constructional modules are fabricated from a fiber composite material (the components of the arches may be made using any of various materials and techniques known in the art, materials including concrete, metal, plastic, fiber reinforced plastic, wood or combinations, col. 3 lines 40-44).
17. In regards to claim 15, Conn discloses the invention including
- a structure as defined in claim 14 wherein the fiber composite material is particulate filled resin material with high strengths fiber reinforcement, or a polyester resin based material (the components of the arches may be made using any of various materials and techniques known in the art,

materials including concrete, metal, plastic, fiber reinforced plastic, wood or combinations, col. 3 lines 40-44).

18. In regards to claim 16, Conn discloses the invention including

- a constructional module or a structure as defined in claim 1 wherein the constructional module is formed from a polymeric material (the components of the arches may be made using any of various materials and techniques known in the art, materials including concrete, metal, plastic, fiber reinforced plastic, wood or combinations, col. 3 lines 40-44).

19. In regards to claim 17, Conn discloses the invention including

- a constructional module or a structure as defined in claim 16 wherein the polymeric material is pultruded (the components of the arches may be made using any of various materials and techniques known in the art, materials including concrete, metal, plastic, fiber reinforced plastic, wood or combinations, col. 3 lines 40-44).

In accordance to MPEP 2113, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. Please note that even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product, i.e the constructional module of claim 16, does not depend on its method of production, i.e. the polymeric material of which it is comprised of is made through pultrusion. *In re Thorpe*, 227 USPQ 964, 966 (Federal Circuit 1985).

20. In regards to claim 18, Conn discloses the invention including
- a structure as defined in claim 1 wherein each of the constructional modules is a truss module (it is inherent that a plurality of components #11 can be placed on top of a foundation or base supports so that it may act as a roof truss module).
21. In regards to claim 19, Conn discloses the invention including
- a structure as defined in claim 1 wherein the structure is a building structure (the essentially identical components and the associated apparatus are such that a building made with them can have straight sidewall portions, vertical if desired, col. 1 lines 51-54).
22. In regards to claim 23, Conn discloses the invention including
- a structure as defined in claim 1 wherein the structure is redeployable (the objectives of the subject invention are to provide structures which are readily erected or dismantled, col. 1 lines 59-61).
23. Regarding claims 24-29, under the principles of inherency, if a prior art device, in its normal and usual operation, would necessarily perform the method claimed, then the method claimed will be considered to be anticipated by the prior art device. When the prior art device is the same as a device described in the specification for carrying out the claimed method, it can be assumed the device will inherently perform the claimed process. *In re King*, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). MPEP 2112.02

Claim Rejections - 35 USC § 103

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

26. Claims 2-6, 8, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conn (U.S. Patent 4,894,962) in view of Ellen (U.S. Patent 4,676,045).

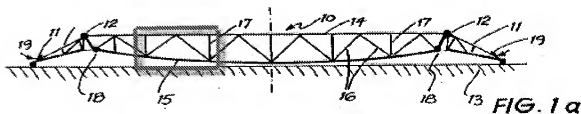
27. In regards to claim 2, Conn discloses the invention including

- a plurality of constructional modules being of predetermined configuration
(a plurality of components of which component #11 is typical, figure 1, col. 4 lines 10-12)
- one or more conditioning elements being arranged to cooperate with constructional modules wherein adjacent of said modules engage one another to form the structure (cable #30, figure 2, col. 4 line 39)

- one or more packer elements being adapted to locate between adjacent of the constructional modules to effect reconfiguration of the structure (insert #55, figure 7, col. 5 lines 12-17)
- a lower tendon (cable #30, figure 2, col. 4 line 39).

28. However, Conn does not teach of an upper and lower chord member or of an upper tendon.

29. Ellen teaches of a post-tensioning steel structure made up of a plurality of sections comprising of a center span #10 and a column structure #11 on each end of the center span #10. The center span #10 comprises of an upper chord #14 and a lower chord #15 as well as vertical members #17 (Ellen, figure 1a where the red box encircles one of the common components of the structure, col. 3 lines 33-44). A tensioning cable runs through the lower chord #15 and erects the structure upon being tensioned (Conn, col. 3 lines 42-44).



30. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have used the upper and lower chords as well as the vertical members of Ellen to construct the identical building components of Conn. Ellen's invention incorporates upper and lower chords as well as vertical members to support the structure, which uses less material than Conn since Conn's invention uses one solid

piece for each component (Conn, figure 1 #11). Therefore, it would have been obvious to one skilled in the art to combine the inventions of Ellen and Conn in situations where the amount of material or the weight of the entire structure was of concern.

31. Conn in view of Ellen discloses the claimed invention except for the upper tendon which cooperates with the upper chord. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have placed a cable through the upper chord that is similar to the cable placed through the lower chord, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. Please note that in the instant application, page 6, lines 19-28, applicant has not disclosed any criticality for the claimed limitations.

32. In regards to claim 3, Conn in view of Ellen discloses the invention including

- a structure as defined in claim 2 wherein the respective tendons are designed to locate within a hollow section (hole #31 which receives cable #30, figure 30, col. 4 line 39) of the lower and upper chord members (It would have been obvious to one having ordinary skill in the art at the time the invention was made to have placed a hole (Conn, figure 2 #31) through the upper chord that is similar to the hole placed through the lower chord, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art) and stressing of the tendons involves pre-stressing or post tensioning of the tendons and the corresponding chord

member (post-tensioning the cable that runs through lower chord #15 erects the structure to its desired configuration, Ellen, col. 3 lines 42-44).

33. In regards to claim 4, Conn in view of Ellen discloses the invention including
- A structure defined in claim 2 wherein the constructional module is shaped in the form of a trapezium (figure 2 of Conn shows each component #11 in the shape of a trapezoid) including the upper and lower chord members being substantially parallel and interconnected at opposite ends with respective web members (the upper and lower chords of Ellen are placed one on top of the other and parallel to each other to mimic the configuration of component #11 that is disclosed in Conn and are interconnected by the vertical members #17 disclosed in Ellen).
34. In regards to claim 5, Conn in view of Ellen discloses the invention including
- a structure as defined in claim 4 wherein each of the constructional modules is of substantially identical shape (Conn discloses a structure comprising a plurality of essentially identical components, col. 4 lines 4-5).
35. In regards to claim 6, Conn in view of Ellen discloses the invention including
- A structure as defined in either of claims 4 or 5 wherein the chord and web members are formed as hollow section members (the upper chord and lower chord are made preferably of tubular steel members interconnected by diagonal members and/or vertical members, Ellen, col. 3 lines 39-44, where tubular is understood to mean cylindrical in shape and hollow on the inside. Though Ellen does not disclose hollow web members, it would

have been obvious to someone of ordinary skill in the art to have used the tubular steel, which the upper and lower chords are comprised of, to construct the web members of the construction module to maintain consistency throughout the component).

36. In regards to claim 8, Conn in view of Ellen discloses the invention including

- a structure as defined in claim 4 wherein the trapezium-shaped constructional module includes a pair of diagonal web members arranged to add rigidity to the module (figure 1a of Ellen displays two diagonal members #16 placed between the two vertical members #17 of each construction module).

37. In regards to claim 20, Conn in view of Ellen teaches of the construction of a building which incorporates a suitable roofing material such as metal sheeting (Ellen, Col. 4 lines 32-35). It is obvious that the sheeting must be elongate and transversely oriented in order for the building structure to be completely covered from side to side.

38. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conn and Ellen as applied to claim 6 above, and further in view of Slater (U.S. Patent 5,761,873).

39. In regards to claim 7, Conn in view of Ellen does not disclose square hollow section members for the chord and web members. However, Slater discloses a beam for use in a frame for building structures which could be used in constructing the frame of the roofing (Slater, col. 1 lines 10-11). Each beam #40 includes a pair of spaced apart hollow metal chords #42 held together by V-shaped webs #44, where each chord

comprises of metal tubing of generally square cross-section (Slater, figure 1 col. 3 lines 65-67 and col. 4 lines 1-5).

40. It would have been obvious to a person of ordinary skill in the art at the time the invention was created to have used square tubing to construct the constructional modules disclosed in Conn in view of Ellen in order to fulfill strength requirements for the building structure. Though Slater does not disclose the web members comprising of square hollow tube members, it would have been obvious to maintain consistency and use the same square tubing for the web members as were used for the upper and lower chords, which would also reduce the amount of different shaped material needed to construct each module.

41. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conn and Ellen as applied to claim 20 above, and further in view of Liddell, Sr. et al' U.S. Patent No. 5,592,789.

42. In regards to claim 21, Conn in view of Ellen discloses the construction of a building which incorporates a suitable roofing material such as metal sheeting (Ellen, Col. 4 lines 32-35) but does not disclose a roof cladding where the sheeting is of a channel section.

43. Liddell, Sr. et al. disclose a modular supporting structure composed of roof truss members, which comprises of a top roof chord and a bottom roof chord, and vertical support members. The support structure provides front and rear endwall faces, sidewalls, as well as a roof surface which provides a means for attaching sheathing to the structure to effectively create an enclosed sealed environment (Liddell, Sr. et al.,

col. 4 lines 48-50). The sheathing may be provided with a plurality of performed eyelets and is to be arranged in a pattern and spaced from each other at given uniform intervals. These eyelets are capable of being aligned in a row with an involved one of the structural base members so as to be positioned just over the channel thereof (col. 9 lines 21-30).

44. It would have been obvious to a person of ordinary skill in the art at the time the invention was created to have combined the building structure and metal sheeting disclosed in Conn and Ellen with the concept of the sheathing being secured across the gap between each structural member in Liddell, Sr. et al. in order to effectively enclose the area underneath the building structure.

45. In regards to claim 22, Conn in view of Ellen does not disclose the roof cladding as made of fabric. However, Liddell, Sr. et al. teach that the sheathing can be one which is commercially sold, such as a plastic film (col. 4 lines 21-24 and 59-61). It would have been obvious to a person of ordinary skill in the art at the time the invention was created to have chosen a commercial material such as the Plastolux glass-reinforced polyester sheets of roofing made by Akraplast Sistemi to construct a roof sheathing which would cover the building structure disclosed in Conn in view of Ellen.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Blickensderfer et al. U.S. Patent 2,399,785 discloses a metal hanger which comprises standardized fabricated elements and is readily erected. Behlen U.S. Patent 3,064,771 discloses a large building covering unit comprising of

composite plates formed from corrugated panels. Beeche et al. U.S. Patent 5,214,899 discloses a modular truss frame system comprising of a top and bottom chords as well as web members. Zeigler U.S. Publication 2005/0204681 discloses a mechanically deployable structure using tensioning members. Ollman U.S. Patent 7,228,670 discloses a structural truss comprising chords and diagonal strut members. Gatzka et al. U.S. Patent 4,890,429 discloses a building truss comprising of upper and lower chords which is able to erect upward by tensioning the cable of the truss.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THEODORE ADAMOS whose telephone number is (571)270-1166. The examiner can normally be reached on Mon-Fri 7:30a.m. to 5:00 p.m. with the first Friday of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Nguyen can be reached on (571)272-4491. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TA
/George Nguyen/
Supervisory Patent Examiner, Art Unit 4134